Before the
Federal Communications Commission
Washington, DC 20554

In the Matter of	)	
	)	
A National Broadband Plan for Our Future	)	GN Docket No. 09-51
	)	
Providing Eligible Entities Access to Aggregate Form 477 Data as Required by the Broadband Data Improvement Act	)	GN Docket No. 09-47
	)	
Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996	)	GN Docket No. 09-137
	)	
Comment Sought on Broadband Accessibility for People with Disabilities Workshop II: Barriers, Opportunities, and Policy Recommendations – NBP Public Notice #4	)	

To: The Commission

COMMENTS OF CTIA – THE WIRELESS ASSOCIATION®
NBP PUBLIC NOTICE #4

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SUMMARY

CTIA - The Wireless Association® ("CTIA") welcomes the opportunity to comment on the ways the wireless industry is meeting the unique needs of persons with disabilities ("accessibility community"). CTIA recognizes that wireless devices and services are vital to the accessibility community's personal, business and emergency communications. In recent filings, CTIA has demonstrated that as a result of a robust and competitive wireless ecosystem, U.S. consumers have the kind of choice and value that consumers around the world strive for. Innovation and competition throughout the wireless ecosystem inures benefits to all U.S. consumers including the accessibility community as wireless carriers compete to offer service plans specifically for individuals with disabilities and innovative mobile devices with built-in accessibility features or compatibility with Assistive Technology ("AT") and applications to replace expensive, immobile assistive communication devices at significantly less cost. As a result of the wireless industry's collective commitment to key accessibility issues, prior barriers to the accessibility community's adoption of wireless – such as cost and accessibility – have lowered and we have seen the accessibility community's satisfaction with the wireless industry increase.

As CTIA has previously detailed for the Commission, unlike traditional wireline Internet access, wireless is not a third broadband pipe into the *home*, but rather broadband to the *person*, wherever they are, whenever they want access to information. Wireless broadband services hold the potential to significantly improve persons with disabilities quality of life through new opportunities in employment, education, health care, and public safety. Specifically, mHealth solutions that make healthcare more attainable, individualized and efficient as well as IP-based mobile emergency communications are expected to significantly improve the accessibility community's ability to reach healthcare and public safety services when they need it most.

The wireless industry is committed to meeting the diverse needs of the accessibility community. Given the breadth and variation of disabilities, wireless carriers and manufactures are committed to ensuring accessibility through the flexibility of offering built-in accessibility features or compatibility with AT and software. The wireless industry's ability to meet the accessibility community's needs may be challenged by calls to meet a definition of "broadband" based on applications that require real-time, two-way, high-quality communication for voice, text and video applications. Meeting these real-time needs will be particularly challenging in light of calls to impose non-discrimination rules on wireless broadband providers.

In the National Broadband Plan, the Commission should maintain focus on programs and policies that CTIA has recommended to facilitate the deployment of wireless broadband to all Americans which will simultaneously encourage broadband adoption by and provide accessible services to persons with disabilities. CTIA and its members are equally committed to continuing voluntary collaborative initiatives with the accessibility community that will ensure accessible wireless broadband products and services based on readily achievable and technologically feasible solutions which is a proven method of addressing accessibility in the fast-moving, innovative and ever-changing aspects of the wireless industry.

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To: The Commission

COMMENTS OF CTIA – THE WIRELESS ASSOCIATION®
NBP PUBLIC NOTICE #4

I. INTRODUCTION.

CTIA – The Wireless Association® ("CTIA")[1] submits the following comments in response to the Federal Communications Commission's ("FCC" or "Commission")

[1] CTIA – The Wireless Association® is the international organization of the wireless communications industry for both wireless carriers and manufacturers. Membership in the organization covers Commercial Mobile Radio Service ("CMRS") providers and manufacturers, including cellular, Advanced Wireless Service, 700 MHz, broadband PCS, and ESMR, as well as providers and manufacturers of wireless data services and products.

Public Notice seeking comment on the impact of broadband on people with disabilities.[2] CTIA respectfully submits that the Commission's National Broadband Plan can best ensure access to wireless broadband for persons with disabilities by maintaining current accessibility requirements based on readily achievable and technologically feasible solutions, encouraging the continuation of voluntary industry and consumer collaborations to address specific accessibility concerns, and facilitating policies previously recommended by CTIA that will encourage the adoption of wireless broadband by all Americans.

The wireless industry welcomes the opportunity to meet the unique needs of persons with disabilities ("accessibility community"). In recent filings, CTIA has demonstrated that innovation and competition throughout the wireless ecosystem inures benefits to all U.S. consumers including the accessibility community. Today, wireless carriers are competing to offer service plans specifically for persons with disabilities and innovative mobile devices with built-in accessibility features or compatibility with Assistive Technology ("AT") and applications to replace expensive, immobile assistive communication devices at significantly less cost. Wireless broadband services hold the potential to significantly improve the quality of life for persons with disabilities through new opportunities in employment, education, health care, and public safety. CTIA and its members are equally committed to ensuring that wireless devices and services are as

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[2] *Comment Sought on Broadband Accessibility for People with Disabilities Workshop II: Barriers, Opportunities, and Policy Recommendations – NBP Public Notice #4,* GN Docket Nos. 09-47, 09-51, 09-137, Public Notice, DA 09-2080 (rel. Sept. 18, 2009) (the "Public Notice").

vital to persons with disabilities' personal, business and emergency communications as they are today.

II. *ACCESSIBILITY AND AFFORDABILITY BARRIERS FACED BY PEOPLE WITH DISABILITIES:* THE WIRELESS INDUSTRY IS PROVIDING CHOICE IN ACCESSIBLE WIRELESS SERVICES AND DEVICES TO MEET AN INDIVIDUAL'S LIFESTYLE.

In recent filings, CTIA has presented data demonstrating that U.S. consumers have the kind of choices and value that consumers around the world strive for. CTIA member companies serve more than 270 million consumers, carried more than 1 trillion text messages on their networks in 2008, offer a wide variety of services and plans, and manufacture more than 600 unique wireless devices for the U.S. market.[3] As a result of the wireless industry's collective commitment to key accessibility issues, prior barriers to the accessibility community's adoption of wireless – such as cost and accessibility – have lowered and we have seen the accessibility community's satisfaction with the wireless industry increase. A recent survey suggested that more than 80 percent of persons with disabilities own or have access to a wireless communications device and use their wireless device for text-based communications (text messaging, e-mail, and instant messaging) and Internet access.[4]

A. Competition Ensures Affordable Access to Wireless Service Plans and Device Options for Persons with Disabilities.

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[3] Comments of CTIA – The Wireless Association®, *Fostering Innovation and Investment in the Wireless Communications Market*, GN Docket Nos. 09-157, 09-51 (filed Sept. 30, 2009) ("Wireless Innovation and Investment NOI"); Comments of CTIA – The Wireless Association®, *Annual Report and Analysis of Competitive Market Conditions With Respect to Mobile Wireless including Commercial Mobile Services*, WT Docket No. 09-66 (filed Sept. 30, 2009) ("Mobile Wireless NOI").

[4] Wireless RERC, Second Report: Findings of the Survey of User Needs (SUN) for Wireless Technology 2007-2009, 5 (March 2009) ("Second SUN for Wireless Technology 2007 – 2009").

As CTIA recently noted, vibrant competition at every level of the wireless ecosystem are bringing U.S. consumers incredible value and driving carriers to develop innovative calling plans to satisfy the extremely strong consumer demand for wireless services.[5] The Commission has found that 95.5 percent of Americans live in census blocks in which three or more wireless service providers offer services, and 90.5 percent live in census blocks where four or more wireless providers offer service.[6] Consumer choice in turn, has driven competition in the form of service offerings like friends and family plans, free long distance plans, national and local plans, and unlimited calling and data options all with the effect of reducing costs to consumers. Indeed, the fact that multiple carriers now offer unlimited plans shows that carriers are very responsive when competitors introduce new pricing models.

Innovation and competition throughout the wireless ecosystem inures benefits to all U.S. consumers including the accessibility community as wireless carriers compete to offer service plans specifically for persons with disabilities and educate the accessibility community about available products and services to fit their needs. For example, AT&T offers Text Accessibility Plans ("TAP") on wireless handsets, including the iPhone, for qualifying consumers that may include unlimited Internet usage and text messages.[7] Sprint's Relay Data Only Plan includes unlimited e-mail, Internet access, Instant

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[5] Comments of CTIA, *Mobile Wireless NOI* at 60.

[6] *Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993; Annual Report and Analysis of Competitive Market Conditions With Respect to Commercial Mobile Services*, Thirteenth Report, at 26 (Table 1) (WTB Jan. 16, 2009) ("Thirteenth CMRS Competition Report").

[7] *See*, AT&T, Text Accessibility Plans (TAP), http://www.wireless.att.com/learn/articles-resources/disability-resources/disability-resources.jsp (last visited Oct. 3, 2009).

Messaging ("IM"), and domestic text messaging.[8] T-Mobile's Sidekick® Data Plan includes unlimited e-mail, instant messaging, Internet access, and text messaging.[9] Verizon Wireless offers Nationwide Messaging plans that include unlimited Internet access and text, picture, instant and video messaging.[10]

In addition, wireless devices typically include built-in accessibility features, compatibility with Assistive Technology (AT) or compatibility with available accessible software as described below. Persons with disabilities can find these innovative mobile devices to replace expensive, immobile assistive communication devices at significantly less cost. Because wireless carriers offer these service plans and devices subsidized for post-paid customers, the wireless industry provides the accessibility community a means to ensure wireless services and devices are affordable for persons with disabilities.

B. Industry-Led Innovation in Wireless Devices Incorporate Accessibility for Persons with Disabilities.

As CTIA recently highlighted, the evolution of wireless devices over the past 30 years is extraordinary.[11] From reductions in price and size to increases in capacity and functionality, the developments in the wireless device marketplace reflect the innovation and investment that pervade the wireless ecosystem with more than 600 handsets

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[8] *See*, Sprint Relay Data Only Plan, http://sprintrelaystore.com (last visited Oct. 3, 2009).

[9] *See*, T-Mobile, Sidekick ® Data Plan, http://www.t-mobile.com/shop/Plans/Cell-Phone-Plans.aspx?catgroup=Internet-Email-cell-phone-plan (last visited Oct. 3, 2009); *see also* T-Mobile, TTY Policy, http://www.t-mobile.com/Company/Community.aspx?tp=Abt_Tab_Safety&tsp=Abt_Sub_TTYPolicy (last visited Oct. 3, 2009).

[10] *See*, Verizon Wireless, Nationwide Messaging Plans, http://aboutus.vzw.com/accessibility/index.html (last visited Oct. 3, 2009).

[11] Comments of CTIA, *Wireless Innovation and Investment NOI* at 29.

manufactured for the U.S. market according to CTIA research.[12] These devices range from simple, streamlined models like the Jitterbug[13] (geared to consumers who want simple handsets that just enable voice calling), the Sidekick™ for T-Mobile[14] (targeted at high text-based communications, social networking and data users), to multi-function devices like Apple's iPhone models, LG's Voyager, Samsung's Instinct, Google's G1, Research in Motion (RIM) Blackberry® devices, and the Palm Pre.[15] Many of these devices, and the operating systems they run, have online stores dedicated to providing users access to third party applications for their wireless devices.[16] Application stores also provide consumers with access to thousands of applications, and Americans have embraced this new facet of mobile wireless broadband service. More than 89 percent of the handsets operating on wireless carriers' networks are capable of browsing the web and each of the top five wireless providers in the U.S. offers Wi-Fi enabled handsets.[17]

Moreover, competition is vigorous with device manufacturers aggressively developing new products in order to increase even the smallest amount of market share. This is especially true as wireless manufacturers incorporate a range of accessibility features into their device designs and wireless carriers offer accessibility software for purchase at discounted prices. For example, AT&T offers Mobile Speak, a screen reader

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[12] *Id.* at 28.

[13] *See* Jitterbug, *available at* http://www.jitterbug.com/ (last visited Sept. 29, 2009).

[14] *See* Sidekick™ for T-Mobile *available at* www.sidekick.com (last visited Oct. 2, 2009).

[15] Comments of CTIA, *Wireless Innovation and Investment NOI* at 65.

[16] *Id.* at 37-39.

[17] *Id.* at 29.

for cell phones that provides speech feedback through a device's built-in speaker, at a significantly reduced rate than general market vendors who offer the same software.[18]

With the increased ability to access the Internet on-the-go and significant growth and adoption of smartphones, an explosion of applications to run on wireless devices also has occurred. The wireless industry recognizes the significant potential to improve accessibility through applications developed by third parties and available for the consumers to choose without incorporating hardware. Wireless manufacturers, such as RIM and Apple, include "accessibility" requirements in their application programming interfaces (API) that encourage application developers to design general applications to be accessible for persons with disabilities.[19] In addition, third party developers are providing applications specifically for persons with disabilities who cannot afford to spend thousands of dollars on AT.[20]

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[18] *Compare* AT&T, Mobile Speak and Mobile Magnifier, http://www.wireless.att.com/about/disability-resources/mobile-speak-magnifier.jsp (last visited Oct. 2, 2009) (offering Mobile Speak for $89.00), *with* HearMore.Com, http://hearmore.com/store/default.asp?idstore=0 (last visited Oct. 5, 2009) (offering Mobile Speak for $295.00), *and* Independent Living Aids, LLC., http://www.independentliving.com/ (last visited Oct. 5, 2009)(offering Mobile Speak for $295.00). *See also*, Verizon Wireless, TALKS™, http://aboutus.vzw.com/accessibility/talks.html (last visited Oct. 2, 2009).

[19] *See*, RIM, Inc., BlackBerry® Accessibility Development Guide, http://docs.blackberry.com/en/developers/?userType=21 (last visited Oct. 2, 2009); Apple, Inc., Accessibility Programming Guide for iPhone OS, http://developer.apple.com/iPhone/library/documentation/UserExperience/Conceptual/iPhoneAccessibility/Accessibility_on_iPhone/Accessibility_on_iPhone.html (last visited Oct. 2, 2009).

[20] *See* AssistiveWare, Proloquo2Go™, http://www.proloquo2go.com/ (last visited Oct. 5, 2009) (Offering a full-featured communication solution through natural sounding text-to-speech voices, symbols, automatic conjugations, and a default vocabulary for people who have difficulty speaking available through the App Store on the iPhone or iPod touch); *and* Purple Communications, Inc., i711 Wireless, http://appworld.blackberry.com/webstore/content/3395 (last visited Oct. 5, 2009) (Offering a wireless internet-based relay communications service allowing deaf and hard-of-hearing individuals to communicate with hearing individuals available through App World for BlackBerry® smartphones) .

This era of intense competition, innovation and investment in the mobile wireless communications marketplace has occurred under a regulatory regime that has allowed the wireless industry flexibility to respond to market demands and regularly incorporate new accessibility features into existing equipment based on readily achievable and technologically feasible solutions. The wireless industry is committed to meeting the needs of the accessibility community based on regulatory requirements that properly balance the need for flexibility in responding quickly to technological and market changes with voluntary initiatives and collaborations that ensure that the benefits of wireless services and devices are available to all Americans.

III. *TECHNOLOGICAL BARRIERS AND SOLUTIONS:* THE WIRELESS INDUSTRY IS COMMITTED TO PROVIDING ACCESSIBLE SERVICES AND DEVICES DESPITE TECHNOLOGICAL AND REGULATORY CHALLENGES.

The wireless industry is committed to meeting the diverse needs of the accessibility community despite numerous technological and regulatory challenges. CTIA's member companies' products and services consider all disabilities including hearing, visual, physical or cognitive impairments simultaneously when designing a communications device but must balance issues of technological feasibility including network capabilities, size features, and battery limitations. The selection of a wireless device is a highly personalized choice for a consumer based on a range of unique and personal factors including attributes of the device, abilities and product awareness of the consumer and resources. Given the breadth and variation of disabilities, wireless carriers

and manufactures are committed to ensuring accessibility through the flexibility of offering built-in accessibility features or compatibility with AT and software.[21]

Today, wireless accessibility is being addressed in a variety of ways. First, wireless devices include built-in features like visual and vibrating alerts and notifications, speakerphones, text and IM applications, tactilely discernible keypads (i.e. QWERTY), shortcut keys, displays with adjustable brightness, predictive text and word completion (AutoText) and spell check, multiple device form factors (touch, flip, candy bar, etc.), and voice activated features.[22] Wireless manufactures also design devices to be compatible with AT solutions including hardware, such as alternate entry devices, TTYs, and adaptive keyboards, or software such as screen readers, magnifiers, text-to-speech and speech-to-text engines, which bring mobility to Augmentative and Alternative Communication (AAC) products.

Unfortunately, the Commission's current accessibility rules, under Section 255 of the Communications Act, do not recognize these various methods of ensuring accessibility as a legitimate means to comply with its accessibility requirements.[23] When

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[21] *See* Comments of the Telecommunications Industry Association, *Broadband Accessibility for People with Disabilities Workshop I*, GN Docket No. 09-51, 3-5 (filed Sept. 15, 2009).

[22] Features listed have been generalized to demonstrate the range of accessible features available on various wireless devices and handsets. *See* RIM, Blackberry Accessibility, www.blackberry.com/accessibility (list visited Oct. 5, 2009); *and* Nokia Accessibility, http://www.nokiaaccessibility.com/ (last visited Oct. 5, 2009).

[23] Section 255 requires that a product or service must be accessible to the extent "readily achievable", and if it is not accessible, must be "compatible with existing peripheral devices or specialized customer premises equipment commonly used by individuals with disabilities to achieve access, if readily achievable." 47 U.S.C. § 255(b)-(d). *See also* FCC, *In the Matter of Implementation of Sections 255 Report and Order and Further Notice of Inquiry*, WT Docket 96-198, FCC 99-181, 16 FCC Rcd 6417 (September 29, 1999); *and In the Matter of Implementation of Sections 255 Report and Order*, WT Docket No. 96-198, FCC 07-110 (June 15, 2007) (Applying Section 255 to inter-connected Voice over Internet Protocol (VoIP) services).

Section 255 was written, the only types of AT available for mobile and wireline phones were items such as TTYs, handset amplifiers, and telecoil loops which required the wireless industry to devote significant resources to ensure compatibility to wireless services and devices.[24] Today, text-based wireless services, such as short message services (SMS), e-mail or IM, are more commonly used by persons with disabilities than TTYs and mainstream accessories for mobile devices, such as a Bluetooth® keyboards and headsets, provide AT benefits without incorporating specific hardware.[25] The Commission's broadband plan should recognize that accessibility to wireless broadband may be met through built-in accessibility features, AT compatibility or software. The Commission should not mandate one method over others.

The Commission's definition of "broadband" may pose a significant regulatory challenge for the wireless industry in the context of ensuring accessibility to wireless broadband services. Some commenters have suggested the Commission define broadband to accommodate real-time, two-way, high-quality communication for voice, text and video applications, including "always-on" access for captioning, video description, text relay, sign language and other interactive messaging and emergency communications services.[26] CTIA shares the vision for more robust services as

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[24] The Commission's rules require that wireless devices and services must be capable of transmitting 9-1-1 calls from individuals with speech or hearing disabilities through the use of TTY devices. 47 C.F.R. § 20.18(c).

[25] Wireless RERC, *Second SUN for Wireless Technology 2007 – 2009* at 9.

[26] Comments of the Wireless RERC, *In the Matter of a National Broadband Plan for Our Future*, GN Docket No. 09-51 (filed June 8, 2009); Comments of the Coalition of Organizations for Accessible Technologies, *A National Broadband Plan for Our Future*, GN Docket No. 09-51 (filed June 8, 2009); Comments of the RERC on Information Technology and Telecommunications Access, *In the Matter of a National Broadband Plan for Our Future*, GN Docket No. 09-51, 3 (filed July 21, 2009); Comments of the
(continued on next page)

technologies evolve, however, as CTIA has previously noted, all broadband delivery platforms share capacity among services and users to a certain degree, but wireless carriers alone face varied throughput, latency, network load, and other factors, based on time of day, atmospheric conditions, wireless device, and other factors, even when measurements are taken from the exact same location.[27] Although wireless networks are affected by these factors disproportionately to wired broadband services, wireless broadband networks deliver consistently reliable performance through reasonable network management techniques.[28]

Commenters' suggestions to define "broadband" to include specific applications to ensure accessibility may exclude wireless broadband services if the Commission does not account for the unique benefits and attributes of mobile wireless broadband that providers face as they deliver broadband over limited allocations of radio spectrum. CTIA suggests the Commission adopt a specific definition of broadband for the mobile wireless context based on currently deployed wireless data technologies rather than any specific set of applications.[29]

Telecommunications for the Deaf and Hard of Hearing, Inc. and other Consumer Groups, *NBP Public Notice #1-Defining Broadband*, GN Docket Nos. 09-47, 09-51, 09-137 (filed Aug. 31, 2009).

[27] Comments of CTIA-The Wireless Association®, *NBP Public Notice #1- Defining Broadband*, GN Docket Nos. 09-47, 09-51, 09-137 (filed Aug. 31, 2009).

[28] Independent testing by PC World magazine found, for example, that wireless carriers consistently delivered on advertised broadband speeds (typically between 768 kbps and 1.5 Mbps). "A Day in the Life of 3G," PC World Magazine (June 28, 2009), *available at*

http://www.pcworld.com/article/167391-2/a_day_in_the_life_of_3g.html.

[29] Comments of CTIA-The Wireless Association®, *NBP Public Notice #1-Defining Broadband* at 2 - 16

Commenters have also suggested that quality of service guarantees will need to be built into wireless systems to prioritize certain types of traffic, such as relay services or interactive emergency communications, over general content, such as streaming video services.[30] As the Commission considers extending the *Broadband Policy Statement* to wireless services, CTIA respectfully submits that wireless carriers cannot ensure the high level of quality service that consumers, including persons with disabilities, expect from wireless in the absence of reasonable network management practices.[31] In the context of accessible applications on the wireless broadband platform, the Commission should consider that the technological limitations of the spectrum medium demand careful management in order to provide wireless consumers with disabilities the high quality wireless broadband experience they seek.

In addition, the Commission should consider the challenges the wireless industry will face by imposing accessibility requirements which conflict with the accessibility requirements of other nations and jurisdictions. As the U.S. Access Board's Telecommunications and Electronic and Information Technology Advisory Committee (TEITAC) reported, accessibility has attracted the attention of standards bodies in diverse fields and countries in light of awareness that some relevant standards and guidelines

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[30] Comments of the Wireless RERC, *In the Matter of a National Broadband Plan for Our Future* at 6.

[31] *See* Julius Genachowski, Chairman, Federal Communications Commission, *Preserving a Free and Open Internet: A Platform for Innovation, Opportunity, and Prosperity* (Sept. 21, 2009), *available at* http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-293568A1.pdf (last visited Oct. 5, 2009). *See also* Comments of CTIA – The Wireless Association®, *Petition to Establish Rules Governing Network Management Practices by Broadband Network Operators*, WC Docket No. 07-52 (filed Feb. 13, 2008).

might conflict with each other.[32] To the extent the National Broadband Plan addresses accessibility standards, CTIA suggests the Commission allow the wireless industry flexibility to consider the harmonization of global accessibility standards in wireless devices and services brought to the U.S. market.

IV. *FURTHERING NATIONAL PURPOSES AND PEOPLE WITH DISABILITIES:* WIRELESS BROADBAND HOLDS SIGNIFICANT QUALITY OF LIFE OPPORTUNITIES FOR PERSONS WITH DISABILITIES IN EMPLOYMENT, EDUCATION HEALTH CARE AND PUBLIC SAFETY.

The mobile wireless marketplace is evolving in ways that demonstrate the high value American consumers now place on mobile voice and broadband services. Mobile broadband additions are driving the growth of high-speed lines overall, and mobile broadband utilization rates are accelerating at breakneck speed.[33] The benefits of wireless networking, however, extend far beyond consumer or enterprise mobile broadband use.

Persons with disabilities will benefit substantially from wireless broadband services that are improving quality of life opportunities in employment, education, health care, and public safety. As the Coalition of Organizations for Accessible Technologies ("COAT") noted, innovations that rely on broadband services, but are yet to be

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[32] CTIA was a participating member of the TEITAC. *See* U.S. Access Board, Telecommunications and Electronic and Information Technology Advisory Committee (TEITAC), *Report to the Access Board: Refreshed Accessibility Standards and Guidelines in Telecommunications and Electronic and Information Technology* (April 2008) ("TEITAC Report") *available at* http://www.access-board.gov/sec508/refresh/report/. *See also* Canadian Radio-television and Telecommunications Commission, *Accessibility of Telecommunications and Broadcasting Services*, CRTC 2009-430 (July 21, 2009) *available at* http://crtc.gc.ca/eng/archive/2009/2009-430.htm.

[33] Report of the Wireline Competition Bureau, Industry Analysis and Technology Division, *High-Speed Services for Internet Access: Status as of December 31, 2007*, at tbls.1-2 (rel. Jan. 2009), *available at* http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-287962A1.pdf.

developed, will continue to enhance options for the accessibility community.[34] Unlike traditional wireline Internet access, wireless is not a third broadband pipe into the *home*, but rather broadband to the *person*, wherever they are, whenever they want access to information.

Telework: From smartphones with applications tailored to meet the needs of employees in disparate industries to wireless PC cards, netbooks and CMRS-enabled Wi-Fi hotspots, wireless network, device and application innovations are providing consumers new ways to work away from the desk. As COAT notes, persons with disabilities tend to be among the lowest employed and income earners in the U.S.[35] By bringing broadband to the person through wireless services, persons with disabilities stand to benefit from the employment opportunities that open various methods of communicating with co-workers wherever they are.[36]

mHealth: Significantly beneficial to persons with disabilities, mobile health ("mHealth") solutions make healthcare more attainable and individualized and are expected to significantly improve the medical community's ability to expand preventive healthcare through remote monitoring, reaching rural areas, and encouraging healthy behavior. As CTIA recently outlined, new smart phone devices are being used by many patients to obtain medical advice and instructions, to manage chronic illness through

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[34] *See* Letter from the Coalition of Organizations for Accessible Technologies, GN Docket No. 09-47, 3 (April 10, 2009).

[35] Comments of the Coalition of Organizations for Accessible Technologies, *A National Broadband Plan for Our Future,* GN Docket No. 09-51, 7-9 (filed June 8, 2009).

[36] Comments of CTIA – The Wireless Association®, *NBP Public Notice #3-Telework*, GN Docket Nos. 09-47, 09-51, 09-137 (filed Sept. 22, 2009).

prescription medication reminders or being used by physicians to improve healthcare management and monitor patients remotely.[37] The Commission should adopt policies that promote the growth of mHealth services that provide significant efficiencies for persons with disabilities who are typically low-income consumers by increasing access to broadband through the Universal Service Lifeline and Link Up programs.

mLearning: CTIA member companies also have taken steps to develop new innovative applications designed to encourage mobile learning ("mLearning") which will directly benefit persons with limited mobility or communication abilities.[38] AT&T, for example, certified a mobile learning application in August 2008 that was designed to heighten the classroom experience and enhance learning at colleges and universities by using an AT&T smartphone to allow interactive student response systems and offer teachers' in-depth analysis of responses.[39] Since 2003, Verizon Wireless has offered Mobile-Mind's ASL (American Sign Language) Fingerspelling application on Verizon Wireless Get It Now[SM]-enabled phones.[40] The Fingerspelling application presents the 26 letters of the ASL alphabet and allows customers to study and quiz themselves using high-contrast, easy-to-see images right on their phone which can allow millions of deaf Americans to communicate with anyone who learns Fingerspelling.

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[37] *See* Comments of CTIA, *Wireless Innovation and Investment NOI* at 40 – 44.

[38] *See id.* at 49 – 50.

[39] *See* Press Release, AT&T, *AT&T to Deliver Mobile Student Response Solution, Enhancing Higher Education Classroom Experience Web-Based Application Certified by AT&T, Enabling Real-Time Polling and Distance-Learning Interaction Using Mobile Devices* (Aug. 26, 2008), *available at* http://www.att.com/gen/pressroom?pid=4800&cdvn=news&newsarticleid=26035.

[40] *See* Press Release, Verizon Wireless, *Verizon Wireless Customers Can Learn the American Sign Language Alphabet With Mobile-Mind's ASL Fingerspelling on Get It Now* (June 12, 2003), *available at* http://news.vzw.com/news/2003/06/pr2003-06-12.html.

Public Safety: Consumers with disabilities have placed significant importance on wireless devices and services for communications during an emergency.[41] The wireless industry and public safety community has invested substantially in deploying Wireless Enhanced 9-1-1 (E-911) service and designing wireless handsets to be TTY compatible for everyday and emergency communications.[42] Today, there are local and independent attempts to utilize innovative wireless services for emergency purposes including IP-based voice, text, social network and video services.[43] However, short message services (SMS) or text-messaging technologies pose unique challenges in the emergency communications context due to continuity of communications, location information and latency in delivery.[44] Some current services, such as TTY, are also rooted in technology that may become technologically obsolete or have declined in importance to the accessibility community.[45]

CTIA understands the desire by public safety and local government entities to examine and utilize new and increasingly common wireless technologies for emergency communications to 9-1-1. However, disparate advanced public safety communication solutions may undermine the Commission's goal to ensure ubiquitous deployment of

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[41] Wireless RERC, *Second SUN for Wireless Technology 2007 – 2009* at 5.

[42] *See*, Comments of CTIA – The Wireless Association®, *Wireless E911 Location Accuracy Requirements*, PS Docket No. 07-14 (filed July 5, 2007).

[43] *See* Brendan B. Read, *Iowa 9-1-1 Call Center First in Nation to Go Live with Text to 9-1-1*, TMCNET.COM (Aug. 4, 2009) http://callcenterinfo.tmcnet.com/Analysis/articles/61301-iowa-9-1-1-call-center-first-nation.htm; *see also* Wireless RERC, *Deaf 911 Project – Ensuring Access to Emergency Assistance*, D4 *available at* www.wirelessrerc.org (last visited Sept. 8, 2009).

[44] The National E9-1-1 Implementation Coordination Office, *A National Plan for Migrating to IP-Enabled 9-1-1 Systems* (Sept. 2009) *available at* http://www.nena.org/sites/default/files/National%20NG911%20Migration%20Plan%20FINAL.pdf.

[45] Wireless RERC, *Second SUN for Wireless Technology 2007 – 2009* at 9.

broadband services to all Americans by creating a patchwork of incompatible public safety systems. CTIA and its members urge these entities to continue working with public safety, industry and accessibility community representatives to focus our collective efforts on developing IP-based 9-1-1 services which meet expectations for emergency communications and may open untold accessibility features for all citizens, especially those with disabilities.

Long-term and significant work is underway to transition our nation's 9-1-1 system to an IP-based 9-1-1 system that supports direct voice, text and data communications access to the 9-1-1 systems. As described below, the wireless industry and public safety community are working together to enhance our nation's emergency system to include accessible emergency communications and alerting technologies and take advantage of technological changes, many of which are coming from innovations in wireless.[46] To further this effort, the Commission should continue to encourage state entities to use dedicated 9-1-1 funds that wireless consumers are paying solely to upgrade our nation's emergency communications system.[47]

V. *POLICY SOLUTIONS AND RECOMMENDATIONS:* THE COMMISSION CAN BEST ENSURE WIRELESS BROADBAND ACCESSIBILITY FOR PERSONS WITH DISABILTIES BY MAINTAINING CURRENT ACCESSIBILITY REQUIREMENTS AND ENCOURAGING VOLUNTARY INDUSTRY AND CONSUMER COLLABORATIONS.

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[46] Dale Hatfield, Brad Bernthal, & Phil Weiser, *Health of the US 9-1-1 System*, 9-1-1 Industry Alliance (2008).

[47] FCC, *Report to Congress on State Collection of 9-1-1 and Enhanced 9-1-1 Fees and Charges* (July 22, 2009) *available at* http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-292216A2.pdf (last visited Oct. 5, 2009)

A. The Current Regulatory Regime Allows the Wireless Industry to Continue Innovations that Ensure Affordable and Accessible Wireless Service Plans and Device Options for Persons with Disabilities.

The current regulatory framework that requires accessibility to wireless communications are working to ensure accessibility remains a priority in wireless products and services based on market demands in this era of intense competition, innovation and investment in mobile wireless communications. As applied to wireless services and devices, the "readily achievable" accessibility standard in Section 255 of the Communications Act has provided the flexibility the wireless industry needs to quickly introduce innovative wireless devices and respond to consumer demand for accessibility features or compatibility with AT or software based on technological feasibility.[48] As one example of the many in the wireless industry, the National Federation for the Blind recently recognized Apple's efforts to make the iPhone, a device largely defined by its graphical user interface that works with a touchscreen, accessible and useable for persons with visual impairments while the original versions of the iPhone were dismissed by the same community for being virtually inaccessible.[49] Any additional accessibility requirements for wireless broadband services that are different from Section 255 may create a disparity in the regulation of similar services and upend the wireless industry's research and development procedures that are working to provide the plethora of accessible wireless devices and services described above.

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[48] 47 U.S.C. § 255.

[49] Chris Foresman, *For Apple, accessibility is much more than lip service*, arstechnica.com (Sept. 21, 2009) *available at* http://arstechnica.com/apple/news/2009/09/for-apple-accessibility-is-much-more-than-lip-service.ars.

The Commission's National Broadband Plan should recognize that accessibility to wireless broadband devices and services may also be met through either built-in accessibility features, AT compatibility or third party software available at the consumer's choice. As described above, the current Section 255 accessibility regime requires the wireless industry to address built-in accessibility followed by compatibility.[50] CTIA and other industry representatives suggest a more flexible "either-or" accessibility requirement that permits the wireless industry to meet accessibility requirements by offering built-in accessibility features or compatibility with AT or third party software. This approach allows persons with disabilities to take full advantage of the current digital wireless market, letting consumers choose to use AT or add accessible third party applications to their devices.

B. The National Broadband Plan Can Enhance Access to Wireless Broadband by Addressing Tower Siting, Spectrum, Network Management, Universal Service and Inter-Carrier Compensation Policies.

The Commission should maintain focus on programs to facilitate the use of wireless broadband to all Americans that will simultaneously encourage broadband adoption by, and provide accessible devices and services to, persons with disabilities. In multiple filings in this docket, CTIA has suggested there remain important regulatory steps that the Commission can take to accelerate deployment and improve competition.[51]

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[50] 47 U.S.C. § 255(d).

[51] *See* Comments of CTIA – The Wireless Association®, *Rural Broadband Strategy*, GN Docket Nos. 09-29 (filed March 25, 2009); Comments of CTIA – The Wireless Association®, *A National Broadband Plan for the Future*, GN Docket No. 09-51 (filed June 8, 2009); Comments of CTIA – The Wireless Association®, *NBP PN #1 – Defining Broadband*, GN Docket Nos. 09-47, 09-157, 09-137 (filed Sept. 30, 2009); Comments of CTIA – The Wireless Association®, *NBP PN #2 – Smart Grid*, GN Docket Nos. 09-
(continued on next page)

These steps include setting a "shot clock" on tower siting applications; allocating additional spectrum for wireless broadband services; facilitating more efficient clearing of spectrum already allocated and auctioned for wireless services; recognizing the unique nature of wireless services and allowing wireless broadband providers to manage their networks to ensure a quality wireless experience for all consumers; ensuring wireless carriers' access to utility poles, including pole tops; and reforming and modernizing the universal service and intercarrier compensation systems to recognize the importance of wireless technologies to consumers.

The Commission can encourage access to wireless broadband services for persons with disabilities without imposing requirements for accessibility separate from those of the overall National Broadband Plan. For example, CTIA has suggested the Commission repurpose the use of targeted Universal Service funds for low-income individuals to receive the benefits for broadband services, which will simultaneously encourage affordable broadband services for persons with disabilities who are said to be among the lowest-income earners in the U.S.[52] In addition, CTIA's recommendations to allocate additional spectrum and allow wireless broadband providers to manage their networks can help enable the wireless industry to provide the kinds of high-data usage applications the accessibility community seeks, such as real-time, two way video services or text-based emergency communications. By adopting CTIA's recommendations, the

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47, 09-157, 09-137 (filed Oct 2, 2009); Comments of CTIA – The Wireless Association®, *NBP PN #3 – Telework*, GN Docket Nos. 09-47, 09-157, 09-137 (filed Sept. 22, 2009).

[52] Comments of the Coalition of Organizations for Accessible Technologies, *A National Broadband Plan for Our Future*, GN Docket No. 09-51, 7-9 (filed June 8, 2009).

Commission can encourage the continued innovation and investment necessary to ensure accessibility to wireless broadband devices, services and applications.

C. The National Broadband Plan Should Encourage Voluntary Industry and Consumer Collaborations to Address Specific Accessibility Issues and Ensure Consumers are Informed about Available Accessible Wireless Devices and Services.

The Commission should encourage industry and the accessibility community to continue to address specific issues of wireless broadband accessibility through voluntary non-governmental collaborative efforts that have worked to address the accessibility community's concerns, such as hearing aid compatibility with wireless devices. For example, CTIA is a participating member of the ATIS Hearing Aid Compatibility Incubator process that advised the Commission's HAC requirements and developed consumer awareness and education initiatives regarding HAC wireless devices.[53] As a result of industry-led and accessibility community-approved HAC recommendations and education initiatives, consumers using hearing aids are now offered a plethora of wireless device and service choices to fit their lifestyles.[54]

The wireless industry also participates on collaborative bodies to address accessibility to emergency communications. The National Emergency Number Association's (NENA) Next Generation Partner Program consists of industry and public

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[53] The ATIS Incubator Solutions Program #4 (AISP.4) investigates performance between hearing aids (HAs) and Wireless Device (WDs) to determine methods of enhancing interoperability and usability for consumers with hearing aids. Members include wireless device manufacturers, wireless service providers, hearing aid manufacturers and accessibility community representatives. ATIS Incubator Solutions Program 4, Hearing Aid Compatibility Incubator, http://www.atis.org/hac/ (last visited Oct. 2, 2009). *See also*, CTIA, *Hearing Aid Compatibility Brochures*, *available at* www.accesswireless.org (last visited Oct. 2, 2009).

[54] *See* FCC, Wireless Telecommunications Bureau, Hearing Aid Compatibility Status Reporting *available at* http://wireless.fcc.gov/hac/index.htm?job=home (last visited Oct. 5, 2009).

safety representatives who, among other issues, are studying the delivery of non-voice messages into an IP-based emergency service network to improve access to emergency communications by deaf and hard of hearing individuals.[55] CTIA and many wireless carriers also participated on the Commercial Mobile Service Alerts Advisory Committee (CMSAAC) that incorporated accessibility requirements into its recommendation for the Commercial Mobile Alert System (CMAS) while balancing competing requirements of technological limitations and system effectiveness.[56] The Commission's CMAS rules have allowed participating carriers and manufacturers the flexibility needed to account for the evolution of mobile devices and capabilities that will encourage the recognition of services and devices commonly used by persons with disabilities for future emergency alerting purposes.[57]

In addition, CTIA was a member of the United States Access Board's TEITAC whose report addresses the real-time text capabilities sought by the accessibility community for emergency communications.[58] CTIA sits on the advisory board of the Wireless RERC, a recognized leader on issues and solutions related to the accessibility and usability of mobile wireless products and services by persons with disabilities.[59] Most recently, CTIA participated in the Wireless RERC's Wireless Emergency

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[55] NENA's Next Generation Partner Program is a joint public-private working group developed to further the mission of creating safer communities by advancing technology, policy and operations issues through research and planning. National Emergency Number Association (NENA), Next Generation Partner Program, http://www.nena.org/ng-partner-program (last visited Oct. 2, 2009).

[56] FCC, *Commercial Mobile Alerting System*, First Report & Order, PS Docket No. 07-287 (April 9, 2009) ("CMAS First Report & Order").

[57] *CMAS First Report & Order* at ¶ 21.

[58] *TEITAC Report* at Section 6.

[59] *See* Wireless RERC, www.wirelessrerc.org (Last visited Oct. 5, 2009) (CTIA's Vice President of External and State Affairs, K. Dane Snowden, is a member of the Wireless RERC Advisory Board).

Communications State of Technology Conference which examined the potential of wireless communications technology for improving support and assistance for persons with disabilities before, during and after a natural or manmade disaster.[60]

These collaborative processes have proven effective at addressing the fast-moving, innovative and ever-changing aspects of the wireless industry with careful attention to the needs of persons with disabilities. Collaborative bodies are working to find solutions that will not result in mandatory standards that may conflict with other international standards, rely on incompatible technologies or require manufacturers and carriers to implement proprietary solutions. The Commission should encourage the continued use of these collaborative bodies that are narrowly focused to address priority accessibility issues.

Wireless carriers and manufacturers also have taken a number of steps to educate the accessibility community about the plethora of available and affordable wireless products, services and features previously described. For example, wireless carriers have engaged in voluntary efforts to educate persons with disabilities and senior citizens about the benefits and utility of wireless services.[61] CTIA, along with our carrier and manufacturing members, provides information about accessible products and features at *www.AccessWireless.Org* and hosts the Wireless RERC's *Hearing Aid Compatibility:*

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[60] *See* Wireless RERC, Wireless Emergency Communications State of Technology Conference, Atlanta, GA (Sept. 21 – 23, 2009), http://sot.wirelessrerc.org/.

[61] *See*, John P. Krudy, *Seniors Tackle Cell Phone Tech*, THE WASHINGTON TIMES (June 1, 2009) *available at* http://www.washingtontimes.com/news/2009/jun/01/seniors-tackle-cell-phone-tech/?feat=article_related_stories. *See also*, AT&T, National Center for Customers with Disabilities (NCCD), http://www.wireless.att.com/learn/articles-resources/disability-resources/nccd.jsp (last visited Oct. 2, 2009).

Choosing a Cell Phone That Works For You, a five-part video series to help consumers choose a HAC wireless device.

Today, consumers are better informed about the variety of accessible devices and services available because of industry and accessibility community educational efforts.[62] For example, the FCC's Consumer & Government Affairs Bureau reported receiving no (zero) informal complaints regarding HAC issues during the first quarter (Jan. 1- March 31) of 2009 down from receiving two informal complaints during the fourth quarter (Oct. 1 – Dec. 31) of 2008.[63] The Commission should consider how these recent voluntary industry efforts to educate the public about accessibility can help to raise awareness of the accessible wireless options available today.

VI. CONCLUSION

The current era of intense competition, innovation and investment in the mobile wireless communications marketplace has occurred under a regulatory regime that has allowed the wireless industry to respond to the demands of the accessibility community and regularly incorporate new accessible features into existing equipment. CTIA and its member companies are committed to meeting the needs of the accessibility community

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[62] Wireless RERC, *Second SUN for Wireless Technology 2007 – 2009* at 7 and 12; Wireless RERC, *Hearing Aid Compatible Cellphones: Findings from the Annual Survey of Consumer Experiences*, 2006-2008 (May 2009).

[63] Further demonstrating the success of this collaborative effort, the FCC's Consumer & Government Affairs Bureau reported receiving no (zero) informal complaints regarding HAC issues during the first quarter (Jan. 1- March 31) of 2009 down from receiving two informal complaints during the fourth quarter (Oct. 1 – Dec. 31) of 2008. FCC, Report on Informal Consumer Complaints Regarding Access to Telecommunications for People with Disabilities (Sept. 8, 2009) *available at* http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-293274A1.pdf; FCC, Report on Informal Consumer Complaints Regarding Access to Telecommunications for People with Disabilities (May 6, 2009) *available at* http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-290584A1.pdf.

based on regulatory requirements that properly balance the need for flexibility in responding quickly to technological and market changes with voluntary initiatives and collaborations that ensure the delivery of the benefits of wireless broadband services and devices to all Americans.

Respectfully submitted,

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